162 Yao people mentioned in Chinese historical
144 records, and are related to the Yao people in Kwangsi. Today, these remaining aborigines are called She Yao, Hsia, or more commonly, She.

162 The total She population is now estimated at 200,000. The great majority are found in Fukien particularly in the Wu-i mountain region of Chien-ning and Ch'ang-ting districts. Only about 44,000 are at present living in the southern section of the Kuo-ts'ang mountain chains near Li-shui in Chekiang Province.[8] Lan, Lei, Chung, and P'an are the four surnames of the She people; intermarriage is approved only
241 among families bearing these names.[9] They are poor slash-and-burn farming folks like the Miao and Yao in South China. (This type of agriculture entails burning off the natural vegetation on the mountain slopes to enrich the soil for planting; but the fertility of the soil is exhausted after two to four years, and the farmer
197 must move on.) Those who work for the Han landlords usually speak the local Chinese dialects.[10]

563 Regionally as well as nationally, the She people are still as much neglected by the Communist administration as they were during

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7. The Yao people of Chekiang and Fukien fled to remote mountain regions after the Yao suppression campaign of Wang Shou-jen during the Ming dynasty. Ibid.

8. Ibid.

9. Ibid.

10. Ibid.

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I. CUSTOMS AND CHARACTERISTIC WAYS OF LIFE

184 The Chinese imperial system was strikingly successful in fostering common basic attitudes among the peoples which it absorbed within its ever-widening sphere, but local and regional sub-cultures, brought into the imperial order at different times throughout more than two millenia did not lose all of their characteristic traits. In the East China Region, for example the oldest "Chinese" area was Shantung, portions of which were settled in the second millenium B. C. When centuries later the coastal areas of Fukien were absorbed by imperial China, the terrain and climate, the dependence on the seas and rivers for livelihood, meant that a way of life, a culture markedly different from any in North China, persisted and developed. A rough analogy may be drawn with Western Europe. Many basic attitudes and values are common to "Christian Europe" from Sicily to the Arctic. yet history and geography have made this area diverse in customs and ways of life. The diversity is less in the 1,000-mile long arc of the East China Region, partly because its cultures were never set off from one another by the nation-state boundaries that divide modern Europe.

●241 181 There are other factors which give to most of the area we are now considering important uniformities in culture. The expansion of "Chinese culture" from Honan and Shantung into

24 the whole of south China was essentially the
181 steady outward push of an efficient agricultural technique which displaced the more primitive aboriginal food-gatherers and primitive slash-burn agriculturists, abosrbed most of these people into its operation and drove the remnants higher and higher into the hills. The characteristically Chinese agriculture is intensive; that is it uses large quantities of human labor in irrigating, fertilizing, and cultivating land for maximum yields. Its unit of socio-economic organization is the village, composed of those families which cultivate the land within easy walking distance of its center. It was in the villages of rural China spread over a vast area to exploit the land through a common technology, that the characteristic way of life developed. It is his family's village which is "home" to Chinese of all classes, no matter how far he may wander or how Westernized his life may have become. There are the ties with his own family's past, symbolized by the ancestral temple and the family or clan burial ground. There are the other families with which his own has built an enduring network of reciprocal favors and obligations. It is in the farming villages that Communist party workers now seek to bring about fundamental changes in the way of life and to break up the old complex of family and local loyalties.

621 What are the common patterns of village
181 life from the plains of Shantung to the narrow, crowded flood-plains of coastal Chekiang and Fukien? We shall sketch these before discussing

668 operation, but these are few and have no immedi ate bearing on the farmer's work year The most striking change in the farmer's life is the new network of associations which the government has imposed upon him and the daily barrage of advice and exhortation to which he is subjected. No longer does he cultivate his land in the manner of his ancestors with the assistance of his family, his clan, and his neighbors. He no longer sets the periods of work and of rest. The Communist leadership is determined that the peasant shall be transformed in three ways: (1) he must be made to produce more, (2) he must become a politically conscious, active supporter of the Communist regime and (3) his attitudes and values must be radically changed.

668 The instrument of this transformation, which 241 is visible and active in the villages is the Party cadre. Party cadres act as the eyes, the ears and the mouths of authority.[14] They are called upon to take the leadership in organizing production and to participate in all types of farm work, such as mobilizing the peasants for cultivation, teaching new farming methods distributing new seed performing grain requisitioning[15] h elping in plant building and repairing dikes etc." The village cadres have been mainly outsiders "foreigners," but the Party has recently been recruiting youths from specific localities and training them to return there as cadres. The

14. Walter E. Gourlay, The Chinese Communist Cadre: Key to Political Control, Harvard Russian Research Center 1952. p. 25.

15. Gourlay op. cit., p. 28.

668 241 cadre was the instrument of land redistribution and brought into the countryside the first major change decreed by Peking. The cadre organized the Peasants' Association in the village and manipulates its meetings and its officers It was the cadre who worked up sentiment and organized the "speak bitterness" meetings in the days of the Land Reform Movement -- occasions used to the full to attack the old familial order in the villages. It is the cadre who organizes the "struggle meetings" in which villagers are made to engage in criticism and self-criticism in order to undermine the old values and instill the new.

The cadres also pushed the organization of "mutual-aid teams" for the sharing of labor and equipment, an effort that struck at the familial organization of farm labor and apparently met with serious difficulties.[16] More recently the cadre has been the instrument for the concerted attempt to build producer co-operatives in the countryside. In such major efforts as the attempt to put Hunan rice farming on a two-crop basis (hitherto only done further south), the cadres were reportedly responsible for training 100,000 farmers.[17]

877 208 The cadre carried on the effort to destroy traditional mores. He publicizes the new marriage law, discourages or prevents arranged marriages,

16. W. W. Rostow The Prospects of Communist China, Cambridge, 1954, p. 84.

17. Reported by New China News Agency, Changsha, April 20 1955; Survey of China Mainland Press (SCMP), No. 1036, April 28, 1955.

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Annex "A," Subparagraph 3a,
Economic Background

AGRICULTURE

241 Because it has a mild climate and abundant rainfall, East China is able to produce a tremendous amount of grain each year. In terms of production, the region occupies second place in the country, next only to Central-South China. It also produces a considerable amount of cotton and ramie. The outstanding feature of East China's agriculture is its dominant position in the production of raw silk and tea. The raw silk of Chekiang and Kiangsu and the tea of Chekiang and Anhwei are not only famous in China but renowned throughout the world for 228 their quality. East China is rich in its fishery resources, because it possesses the longest coastline and plenty of inland streams, which are the sources for both salt-water and fresh-water fishing.

I. CULTIVATED LAND AND RURAL POPULATION

162 According to the recent census,[1] completed on June 30, 1953, by the Communist government, the total population of East China, including Shanghai Municipality, is 156 million. If we

1. Jen-min Jih-pao [People's Daily], Peking 1, 1954, p. 1.

474 433 According to this table, the per shih-mou (1/6 acre) yeild of the Chang Lai-sheng Agricultural Producers' Co-operative was 12 per cent higher than that of the Ting Ta-sheng Mutual-aid Team and 15 per cent higher than that of the Ting Yin-sheng farm in Ya-t'ien hsiang, Wu-chin hsien, Shantung Province, the output of Sung Tsung-kuo Agricultural Producers" Co-operative per shih-mou was 21 per cent over that of Sung I-pin's Mutual-Aid Team and 47 per cent over that of the Sung Pao-jen farm. The average per shih-mou output of cotton of the 3 year-round mutual aid teams of Chu-chai hsiang, Shanghai, was about 10 per cent higher than that of 2 temporary mutual-aid teams and 50 per cent higher than the average of 14 individual farms.

IV. AGRICULTURAL PRODUCTION OF EAST CHINA

241 The agricultural production of East China includes grains, raw cotton, oil-bearing crops, silk, tea, ramie, hemp, tobacco, and fish. Other agricultural products which bear little significance are not included in the present discussion.

A. Grain Production

241 433 East China produced 23.8 per cent of the country's grains, with rice heading the list, constituting about 45.4 per cent of the total grain production[16] in 1953. Wheat came next, representing 13.5 per cent of the total output in the same year

16. Ching-chi Tao-pao [Economic Bulletin], Hong Kong, March 10, 1953, No. 309, p. 12.

1: Stanford U. S-4, 5 1956 AF15 East China AF15

241 In terms of acreage of grain crops, wheat led by
433 117.87 million shih-mou (19.65 million acres) in 1946, rice ranked second by 92.82 million shih-mou (15.47 million acres). Table 6 shows the acreage of different major grain crops of 1946 by provinces in East China, with equivalent acres in parentheses.

In analyzing Table 6, the acreage of other crops had little significance. In terms of production, according to a Communist report, East China showed considerable growth during the five-year period, 1950-54, under Communist rule. The production data of different grains by years are shown in shih-piculs, with eqivalent tons in parentheses below.

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Table 6. Acreage of Grain Crops, 1946*
S = Shih-mou.)
(Unit: Million. A = Acres.)

Province	Rice	Wheat	Barley	Oats	Corn	Kaoliang	Millet	Sweet Potatoes	Others#	Total
Kiangsu	34.22S (5.70A)	26.19S (4.37A)	10.81S (1.80A)	3.80S (0.63A)	1.69S (0.28A)	1.33S (0.22A)	1.18S (0.20A)	0.85S (0.14A)	8.20S (1.37A)	88.29S (14.71A)
Chekiang	28.75S (4.79A)	13.37S (2.23A)	7.13S (1.19A)	-----	1.14S (0.19A)	0.17S (0.03A)	0.27S (0.04A)	2.30S (0.38A)	4.07S (0.68A)	57.20S (9.53A)
Anhwei	15.05S (2.51A)	16.89S (2.81A)	4.39S (0.73A)	0.15S (0.02A)	1.26S (0.21A)	4.49S (0.75A)	0.53S (0.09A)	2.56S (0.43A)	2.85S (0.47A)	48.17S (8.03A)
Shantung	1.15S (0.19A)	52.83S (8.80A)	2.65S (0.44A)	0.58S (0.10A)	8.57S (1.43A)	16.32S (2.72A)	19.68S (3.28A)	3.57S (0.59A)	2.95S (0.49A)	108.30S (18.05A)
Fukien	13.65S (2.28A)	8.59S (1.43A)	2.66S (0.44A)	-----	0.02S (0.003A)	0.02S (0.003A)	0.20S (0.03A)	3.40S (0.56A)	1.05S (0.17A)	29.59S (4.93A)
Total	92.82S (15.46A)	117.87S (19.66A)	27.64S (4.61A)	4.53S (0.75A)	12.68S (2.11A)	22.35S (3.72A)	21.86S (3.61A)	12.68S (2.11A)	19.12S (3.18A)	331.55S (55.25A)

* Statistical Yearbook of China, 1948, pp. 73-74.

Including broad beans and peas.

(Table 6 faces p. 752)

(Table 6 faces p. 752) [a J

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Table 7. Grain Production by Years

(Unit: Million. S = Shih piculs. T = Tons.)

Grains	1931-1937 Average*	1949#	1951§	1952▽	1953✕	1954◇	1955§
Rice	303.08S (16.67T)	216.10S (11.89T)	280.93S (15.45T)	353.44S (19.44T)	360.46S (19.82T)	366.30S (20.15T)	385.71S (21.21T)
Wheat	174.68S (9.61T)	64.26S (3.53T)	83.54S (4.59T)	105.10S (5.78T)	107.19S (5.89T)	108.92S (5.99T)	114.69S (6.31T)
Soyabeans	66.80S (3.67T)	33.32S (1.83T)	43.32S (2.38T)	54.49S (3.00T)	55.57S (3.06T)	56.48S (3.10T)	59.47S (3.27T)
Tubers	138.00S (7.59T)	49.98S (2.75T)	64.97S (3.57T)	81.74S (4.49T)	83.37S (4.58T)	84.71S (4.66T)	89.21S (4.91T)
Others**	223.78S (12.31T)	112.34S (6.18T)	146.04S (8.03T)	183.73S (10.10T)	187.38S (10.31T)	190.41S (10.47T)	200.50S (11.03T)
Total	906.34S (49.85T)	476.00S (26.18T)	618.80S (34.02T)	778.50S (42.81T)	793.97S (43.66T)	806.82S (44.37T)	849.58S (46.73T)

[Face P. 752] [b]

1:Stanford U. S-4,5 1956 AF15 East China AF15

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* Chung-kuo Liang-shih Kai-k'uang /General Survey of China's Food/, Nanking: Hsing-cheng-yuan Hsin-wen-chu /Office of Information, Executive Yuan/, 1947, pp. 4-5.

See 1952 Nien Ching-chi Nien-pao /Economic Year Book 1952/, Hong Kong: Ching-chi Tao-pao She /Economic Bulletin Publishing Co./, 1952, pp. 37-38.

s & v Jen-min Shou-ts'e /People's Hand Book/, Tientsin: Ta Kung Pao /Ta Kung Daily/, 1955, pp. 511-512. Economic Bulletin, Hong Kong: March 10, 1953, No. 309, p. 12.

x Hua-chiao Jih-pao /China Daily News/, New York: August 4, 1955, Chen Yun's Report to the National People's Congress on July 21, 1955.

y Ibid. The total grain production in 1954 was 3390 million Shih-piculs, as reported by Chen. Using 23.8 per cent for East China's share (Ching-chi Tao-pao March 10, 1953, p. 12) to calculate, the total production of grain in East China was 911.91 million Shih-piculs (50.15 million tons). The proportional distribution between different crops was rice 45.4, wheat 13.5, soyabeans 7.0, tubers 10.5, and others 23.6. Economic Bulletin March 10, 1953, p. 12.

z Basing on Li Hsien-nien's Budget Report of 1955, the projected grain production will be 5.3 per cent higher than 1954, and allocate the amount of each crop produced according to the same ratio of 1954. (NCNA July 8, 1955)

** "Others" are the total amount of millet, kaoliang, corn, barley, oats, broad beans, and peas.

(Table 7 faces p. 752)

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(Table 7 faces p. 752)

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Table 8. Grain Production of East China by Provinces*
S = Shih-piculs)
(Unit: Million. T = Tons.)

Grains	Kiangsu		Chekiang		Anhwei		Shantung		Fukien	
	1949	1951	1949	1951	1949	1951	1949	1951	1949	1951
Rice	76.64S (4.18T)	117.00S (6.44T)	51.42S (2.83T)	78.30S (4.20T)	39.60S (2.18T)	60.00S (3.30T)	0.60S (0.03T)	0.90S (0.05T)	28.76S (1.58T)	45.80S (2.41T)
Wheat	24.62S (1.32T)	58.58S (3.11T)	10.92S (0.58T)	12.78S (0.70T)	17.64S (0.96T)	40.16S (2.20T)	34.24S (1.88T)	65.70S (3.61T)	6.94S (0.38T)	7.30S (0.40T)
Soybeans	7.74S (0.42T)	16.40S (0.90T)	1.30S (0.07T)	2.74S (0.15T)	2.58S (0.14T)	5.46S (0.30T)	5.82S (0.32T)	12.30S (0.67T)	0.64S (0.04T)	1.36S (0.07T)
Tubers	31.38S (1.73T)	38.42S (2.11T)	12.64S (0.69T)	15.38S (0.84T)	6.28S (0.34T)	7.68S (0.42T)	25.10S (1.36T)	30.74S (1.69T)	23.22S (1.27T)	28.44S (1.56T)
Others#	54.30S (2.98T)	67.42S (3.71T)	13.36S (0.73T)	15.60S (0.87T)	21.38S (1.18T)	26.06S (1.43T)	71.78S (3.95T)	87.84S (4.83T)	3.48S (0.19T)	4.38S (0.23T)
Total	194.68S (10.63T)	295.82S (16.27T)	98.54S (4.87T)	125.00S (6.76T)	78.58S (4.30T)	139.36S (7.65T)	137.54S (7.56T)	197.48S (10.85T)	63.04S (3.46T)	85.18S (4.67T)
Percentage of increase		/52%		/26%		/78%		/43%		/35%

*Chung-kuo Nung-pao /Chinese Agriculture Bulletin/, Peking, Nung Yeh Pu /Ministry of Agriculture/, 1952, No. 1, p. 20; Ta-kung Daily, Hong Kong, October 1, 1952. Hsin-hua Yueh-pao /New China Monthly/, Peking, 1950, Vol. II, No. 4-6, pp. 1336-1337; 1951, Vol. III, pp. 378-379.

#"Others" including the total amount of millet, corn, kaoliang, barley, oats beans, and peas.

(Table 8 faces p. 752)

(Table 8 faces p. 752) [d]

1:Stanford U. S-4, 5 1956 AF15 East China AF15

1: Stanford U. S-4, 5 1956 AF15 East China AF15

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433 Table 7 indicates that, during the five-year period (1951-55), although great efforts were made to increase grain production, not one single year exceeded the pre-war 1931-37 average of 906 million shih-piculs (50 million tons). Probably flood and drought and the negative effects of land reform accounted for the failure. The statistical data of grain production of the individual provinces in East China in 1949 and 1951 are shown by shih-piculs in Table 8 below with equivalent tons in parentheses.

241 In 1951, nearly all the six provinces in-
433 creased production ranging from 26 per cent for Chekiang to 78 per cent for Anhwei over that of 1949. In terms of the total output, Kiangsu led by 295.82 million shih-piculs (16.27 million tons), Shantung came next with 197.48 million shih-piculs (10.85 million tons), Anhwei and Chekiang occupied third and fourth places, producing 139.36 and 125.00 million shih-piculs (7.65 and 5.76 million tons) respectively. The total grain production of Fukien in 1951 was 85.18 million shih-piculs (4.67 million tons), which constituted only about 10 per cent of the total grain output in East China in the same year.

V. THE ADEQUACY OF FOOD SUPPLY

433 The essential problem in East China is the determination of the adequacy of the supply of grain in comparison with the local demand. In order to approach the problem logically, the following steps are used: (1) the gross production data of different grains of 1954 are used as the basis for calculation; (2) from the gross amount of the unprocessed grains, provision for seeds, fodder, and waste are allowed and deducted; (3) the percentage allowed for the milling of different grains is set according to the nature of the product as well as the eating habits of the population;; (4) after reducing all the unprocessed grains to milled

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24/ Water conservation projects in this region[1] have been responsible for some progress in agricultural production. Although thousands of lives were sacrificed during construction, some fruitful results have been achieved. Evidence for this assertion can be found in the three good harvests between 1951 and 1953 recorded in Kiangsu. The Communist regime, with little consideration for human welfare, accomplished these tasks at the expense of the rural masses.

1[i.e. East China. -- Analyst]

2: Murphy G-4 (no date) 1953 AF15 East China AF15

311 The 226 244 extensive system of lakes articulated with Tai Lake is by no means lost to agriculture, since most of these bodies of water are shallow enough to permit widespread aquiculture of water chestnuts and lotus (whose roots form an important part of the local diet), as well as supporting a considerable fishing industry on both an exploitative and a farming basis.[2]

311 241 Cultivation within the triangle is at least as intensive as in any other part of the world. The growing season allows only one crop of rice, but winter crops of wheat and rape seed harvested in May occupy the rice fields after they are drained following the rice harvest in September-October. Cotton is planted in dry fields at the same time as rice in early May. Broad beans are usually intercultivated with the cotton. West and northwest from Soochow as far as the northern tip of Tai Lake as much as 20 per cent of the cultivated area is devoted to mulberry, but even here rice is dominant, and over the triangle as a whole occupies about 75 per cent of the total crop acreage. Vegetables are grown in small plots by nearly every farmer, and within a day's boat travel of Shanghai (approximately 30 miles) they rank third (after rice and cotton) in total acreage.[3]

241 Intensive cultivation is decreed by the dense population characteristically associated with deltas in east Asia (the fertile triangle is one of the primary density areas of China), and made possible by the natural fertility of the soil and the ready availability of water. Common usage in the area of the triangle calls for the bodily exchange of soil once in every three years between rice paddies and

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to depending on them at the specific points for which they are cited below. They would include C. C. Chang, Agricultural Statistics (1930), and *China's Food Problem* (1931), Chiang I-shih, Production of Various Cereals (1947), Chao Lien-fang, The Problem of Rice Production (1947) — including estimates from the early 1930's of the amount of cultivated land in rice, by provinces — Chiang Hsüeh-chai, A New Estimate of the Supply and Demand (1936), Feng Hu-fa, Source Materials (1935), Kuo Ming-hsüeh, Chinese Agricultural Resources (1948), Shen Tsung-han, Chinese Food Problems (1947), and *The Agricultural Resources of China* (1951), and T'ang Chi-yu, *An Economic Study of Chinese Agriculture* (1924) — including figures as of 1920 for rice production and cultivated land in the seven leading rice provinces. Wang P'ei-hsün, The Volume of China's Food Imports and Exports (1947), is a brief general discussion of China's foreign trade in food commodities as an introduction to selected statistics from individual ports.

2: Murphy G-4 (no date) 1953 AF15 East China AF15

fields growing other crops (primarily cotton), since this entails a thorough turning over of the soil which crop rotation alone would not accomplish. When the exchange is completed, the new surfaces are then overlaid with an average per acre of 70 tons of mud dug from the canals. Maintenance of navigability in the canals is a communal responsibility, and farmers are recompensed for their dredging labor by using the highly fertile calcareous mud (which as a rule has supported a heavy growth of water weeds as well as ultimately receiving considerable farm and village waste), also by making use of the canals to market their production and receive goods from outside.[4]

The farms are small, 93 per cent of them under 50 *mow* and 25 per cent under 5 *mow*, with an average size of 34 *mow*, according to a Chinese statistical study[5] (one *mow* equals approximately one sixth of an acre). Their cultivation is better described as gardening than as farming. Tools in general use are limited to the *t'u t'ou* (earth head) — a large-bladed hoe — and smaller metal-headed rakes, hoes, and mattocks, all designed for painstaking hand labor. Water is transferred from the canals to fields for irrigation by means of endless chains of small buckets mounted on inclined frames and driven by foot treadles.[6] The average number of total animal units per farm is lower in this area, according to Buck, than anywhere else in China.[7] This is due to the small size of the farms, and to the abundance of human labor, which cannot afford to allocate feed for animals in return for the labor, meat, and manure which they produce. Manual gardening gives a greater return than animal husbandry or farming with draft animals from this fertile and repeatedly refertilized soil in proportion to the food it consumes, and permits a population of 40 million people in the fertile triangle.

With such intensive cultivation, crop yields in the fertile triangle are among the highest in China. Buck's samplings show both rice and wheat yields in this area consistently among the upper five per cent of rice and wheat yields for the 161 localities in China covered by his study.[8] Within a thirty-mile radius of Shanghai, where the city's night soil is cheaper and more readily available than in outlying districts (see below, pp. 162–64), yields of all crops are exceeded by only two counties in China (both near Canton)

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reported by Buck. According to his figures, the grain production (or equivalent) per male adult of the population (or equivalent) within this thirty-mile radius averages 2594 kilograms, as compared with an all-China average of 1400 kilograms.[9]

The problem of how Shanghai is fed is, however, not answered merely by the facts of fertile soil, intensive cultivation, and high crop yields in its immediate hinterland. While the delta is clearly productive, it is equally clearly densely populated, and it is likely that a larger proportion of the total population of the fertile triangle lives in cities than is the case in any other area of comparable size in China (map 5).

Buck estimates that the consumption of food energy on farms in this area is 3486 calories per adult-male unit per day, a high figure for a so-called subsistence agricultural economy, and exceeded in Buck's figures for China only by the rice-tea area immediately to the south.[10] Far from being a subsistence economy, the triangle supports a relatively commercialized agriculture. Buck estimates for example, that the farmers of this area sell 61 per cent of their farm products immediately after harvest, and that 60 per cent of farm products are sold (i.e., first sale) as far away as the nearest market town, as distinct from the local village. Both of these figures are exceeded only by those from the double-cropping rice area of Kwangtung.[11]

Assuming that the favorable natural environment and the intensive farming methods result in a total food production great enough to allow a surplus for feeding the delta's cities, how is it marketed in this pre-industrial economy? Cities of the magnitude of Shanghai have hitherto never developed except where mechanization and technological improvement in agriculture have been accompanied by the growth of railways, and later, highways.* Shanghai, competing for the food surplus of the delta with Hangchow, Nanking, Soochow, and other large delta cities, added well over three millions to its population between 1843 and 1936, while agricultural practices in the delta remained in general just as they

* Ancient Rome and Peking, both cities of approximately one million long before the industrial revolution, might constitute exceptions. Both owed their size primarily to their administrative functions, and both depended heavily on water transport.

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picul (the Shanghai rice picul during this period equalled 172 pounds); b. (out-province rice) CNC$12.40 per picul; c. (foreign rice) CNC$12.30 per picul.[17] At these levels the composition of the rice supply tended to remain stable, with local rice accounting for over 80 per cent of the total. Shanghai in general prefers to eat local rice even when its price rises slightly above that of foreign rice, as usually happens during the local planting season and at certain other times (see below). Foreign rice is a different type from the local product and there is prejudice in Shanghai against its taste and cooking properties. Any great change in these relative prices, however, upsets the balance. When foreign rice is relatively cheap, its Shanghai sales are large, but as fresh supplies continue to be ordered by the merchant groups, the Saigon price rises and the normal price and supply situation is restored.

2. The planting season for rice in the delta area, which lasts from early May to early June. During this period, movements of rice to Shanghai from the delta virtually cease, and the city draws on rice it holds in storage, plus foreign imports. The fact that the planting season usually coincides with the wet period of the plum rains means that the Shanghai price of rice rises sharply from late May to mid-June. New supplies of local rice come into the Shanghai market in early July (i.e., from the previous year's crop, which has been stored in the local collecting centers but which is not moved to Shanghai during the planting season, the greatest peak labor period of the agricultural year). The Shanghai price regains its normal level as a rule before the end of the month.

3. The weather. Hot and/or humid weather tends to rot stored rice, and thus depresses the price by forcing sales, or stimulates it by jeopardizing what is stored. Drought seldom affects harvests seriously in the delta with its network of canals to supply irrigation water. The greatest effect of rain is on the day-to-day movement of rice from local production areas to the Shanghai market. The delta waterways are easily flooded over their banks by rain and wind, and by both in combination with the tide in the stretches which receive tidal inflow from the Yangtze or the Whangpoo.*

* This might be deduced from the discussion of the delta above in Chapter Three, and it is referred to specifically in the two journals cited for this account of the rice

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439 consumption in the city. As in the case of Shanghai, Canton may act as an entrepôt for rice imports to other cities.

433 489 This may suggest that China as a whole produces enough to feed itself, even by traditional farming methods, if only the food could be transported cheaply enough. As it is, foreign rice moves only to the large coastal cities, because transport costs once it leaves the sea prevent further penetration. The rice comes in because at certain periods it is cheap, and it is cheap relative to Chinese rice primarily because of the difference in transport costs between sea and land. It may be found when full facts are available that the flow of rice to large Chinese cities, which depends on price, is governed predominantly by transport costs, as it is in the case of Shanghai, and that where cheap transport is possible, local sources form the major part of the supply.

Other Food Commodities

241 438 The Yangtze delta, and more especially the fertile triangle, is a specialized agricultural area, more so than most agricultural regions of China because of its greater degree of commercialization. Its special crop is rice, with cotton, mulberry, and vegetables the only other significant items. Some wheat is grown, but it is of relatively minor importance in the fertile triangle and is raised mainly as a dry-field winter crop between rice plantings. Shanghai's dependence on local sources for rice is thus not matched by the rest of its food supply. The significance of the city's water connections with other agricultural regions is apparent in the fact that in a largely pre-railroad and pre-commercial economy, Shanghai is able to depend on distant sources for many food items in a way, if not to a degree, which is in certain respects comparable to the food supply pattern developed for large cities in the United States and Western Europe.

244 438 Shanghai has its own truck- and market-garden area, much as large Western cities have, with the difference that vegetables in particular have always been grown there and that environmental conditions in the fertile triangle are virtually ideal for market-garden-type production. Near most Western cities, soil, climate, and relief must often be fitted with difficulty into the needs of the city for fresh local food. Vegetable production in the fertile triangle

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by 1934 included four sewage-treatment plants and two incinerators for household refuse. During the same period cesspools were dug for most buildings in the Settlement beyond the limits of the central sewage system. The night soil contractors continued to remove wastes from buildings without cesspools, and, by agreement with the Council, to drain the cesspools at regular intervals. Most of the sewage treated by the new plants was sold to the night soil contractors as before, but now in a concentrated form which was also less dangerous to health when used as fertilizer. Non-organic wastes were dumped at sea by the Council, or were used for raising low-lying land. Household garbage continued to be collected by the night soil contractors as before.[54] These malodorous cargoes went out from Shanghai entirely in barges, many of which were open and which were (and still are) to be seen on all of the waterways running through the city. It was these which attracted the adverse comment to which the Municipal Health Commissioner replied in the statement referred to above.

The night soil produced by two, three, or four million people and distributed to farmers must have been a not inconsiderable factor in maintaining or enhancing soil fertility and in making possible unusually high yields within a thirty- or forty-mile radius of Shanghai.* Existing figures for crop yields are unfortunately calculated on the basis of *hsien*, and *hsien* boundaries do not even approximately coincide with the thirty- or forty-mile radius. The Municipality of Greater Shanghai itself occupies 320 square miles (of which 210 square miles is listed as farm land) within the area of night soil distribution from the city. The effect of this distribution therefore cannot be measured with any accuracy in terms of crop yields, although the figures do show about 10 per cent higher yields of all crops in the *hsien* which have some part of their area within a forty-mile radius of Shanghai than in the remaining *hsien* in the Kiangsu section of the delta south of the Yangtze and east of Tai Lake.[55] Soil and land forms are generally uniform over this area. It is a readily observable fact that fields are greener and crops heavier and further advanced within a day's foot or water travel

* See above, p. 137. Buck's figure was compiled from surveys in only one district (about one quarter of one *hsien*) within this area.

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241 from large Chinese and Japanese cities than in the remainder of th rural districts, into which the green fades off beyond 30 or 4 miles. This is particularly true at Shanghai, and is most clearly see from the air, but it also strikes the eye on the trip by train fron Shanghai to Nanking, or in walking through the country.

Night-soil distribution could have provided an automatic increas in crop yields in the immediate vicinity of Shanghai as the city' population grew. In a country where even near the large coasta cities and under a system of relatively commercialized agriculture chemical fertilizers are beyond the means of the farmers, the heav use of night soil in the neighborhoods of large cities where it ca be purchased at a price even the poorest farmer can afford can b assumed an important factor for agriculture. In the case of Shanghai it may help to explain the apparent local surplus of rice from th delta which goes to feed the city.

722 433 439 The second problem concerns the future. Shanghai up to 193 had managed to feed itself largely from its local supply areas During the disturbed war years, virtually unbroken from 1937 t 1949, it was for long periods forced to depend on imported rice although the inference is still that under normal conditions the local supply areas remain adequate. But can the city continue t grow on this basis, or will the population not eventually outrun the food supply as it has done repeatedly in the past throughou China? Obviously this is a possibility. It would lead to greate dependence on rice imports, and greater use of railways and high ways as these expand and become cheaper carriers, to bring rice and other food into the city from longer distances. In the absence of figures and information for the period since the war with Japan comparable even to the inadequate data for the pre-1937 period, we have no reliable basis for judging whether Shanghai has already entered a new phase in this vital aspect of its economic life. As we can measure it, this huge city is a world anomaly in the pattern and mechanics of its food supply, but as China is increasingly drawn into the world economic pattern, with Shanghai leading and accelerating the change as before, this anomaly, like most of its others, will disappear.